



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/552,813

10/11/2005

Sandor Nemeth

NL 030435

4272

24737

7590

10/30/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

NGUYEN, KHANH TUAN

ART UNIT

PAPER NUMBER

1751

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/552,813	Applicant(s) NEMETH ET AL.	
	Examiner Khanh T. Nguyen	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references cited in the Search Report PCT have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "relatively high temperature" in claim 1 (line 3) is a relative term which renders the claim indefinite. The term "relatively high temperature" is not defined by the

Art Unit: 1751

claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Examiner is unclear about the limitations of operation temperature by the term relatively high temperature.

4. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "based on" in claims 1-3 are used by the claim to mean "based on", while the accepted meaning is "comprising." The term is indefinite because the specification does not clearly redefine the term.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: materials that make the sol-gel precursor electrically conductive. Applicant is suggested to amend claim 1 to recite -- and metal particles --.

Claims 2-8 are dependent claims of claim 1 thus inherit the same deficiencies.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Olding et al (U.S Pub. 2002/0145134 hereinafter, "Olding").

7. Regarding claims 1-2, Olding discloses an adhesive suitable for making electrically conductive connection to a material or system which is operated at a relatively high temperature, wherein adhesive is based on a sol-gel precursor and metal particles (conductivity phase). Page 3, [0041].

8. The claim preamble must be read in the context of the entire claim. The determination of whether preamble recitations are structural limitations or mere statements of purpose or use "can be resolved only on review of the entirety of the [record] to gain an understanding of what the inventors actually invented and intended to encompass by the claim." Corning Glass Works, 868 F.2d at 1257, 9 USPQ2d at 1966. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed

Art Unit: 1751

invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation").

In instant case, Olding discloses the claimed "adhesive" use as an electrode material on heated components. Page 3, [0042].

9. Regarding claim 4, Olding further teaches the conductive particles comprise silver particles or silver-palladium alloy (i.e. silver alloy) particles. Page 1, [0012].

10. Regarding claim 5, Olding further teaches an alumina powder (non-conductive) particles size of 2.7 micron (page 4, col. 56) a conductive (metal) particles, silver, ranges from 1-100 micron (pages 2-3, col. 12). The ration of alumina powder particles size is less than 1/10 of the size of the silver metal particles.

11. Regarding claim 5, Olding further teaches an alumina powder (non-conductive) particles size of 2.7 micron (page 4, col. 56) a conductive (metal) particles, silver, ranges from 1-100 micron (pages 2-3, col. 12). The ration of alumina powder particles size is less than 1/20 of the size of the silver metal particles.

Art Unit: 1751

12. Regarding claim 7, Olding further teaches the thickness of the adhesive is at least 100 micron (0.1 millimeter). Page 4, [0060].

Regarding claim 8, Olding further teaches the coating (electrically conductive adhesive) may find application in small appliances us as space heaters, kettles, coffee makers, toasters/ovens, hair dyers, hotplates, stove top elements, hot runners for injection molding and floor heaters (i.e. grill, steam iron, iron, ironing device, heated ironing board, hot-pot, waffle iron, deep fat fryer, rice cooker, sterilizer, hair styler, heated ironing board, facial steamer and facial steamer for the purpose of heat resistance). Potential automotive and industrial applications may include heaters, defrosters, seat warmers, reactor heaters and pipe heaters/warmers (i.e. pressurized boiler for system irons and cleaners, steamer or steam cleaner, garment cleaner and water flow heater). Page 3, [0042] and [0047].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olding et al (U.S. Pub. 2002/0145134) in view of Sakai et al (U.S. PAT. 5,847,322 hereinafter, "Sakai").

Olding is relied upon as set forth above. With respect to instant claim 3, Olding does not disclose or suggest the sol-gel precursor comprises hybrid sol-gel materials based on methyltri(m)ethoxysilane, phenyltri(m)ethoxysilane, and/or diphenyldi(m)ethoxysilane.

In the same field of endeavor, Sakai teaches the sol-gel precursor comprises hybrid sol-gel materials comprising of silane-modified polyolefin resin, alkoxysilane, such as methoxysilane, ethoxysilane, and butoxysilane (i.e methyltri(m)ethoxysilane, phenyltri(m)ethoxysilane, and/or diphenyldi(m)ethoxysilane). The silane-modified polyolefin resin is use for the purpose of high affinity for both the polyolefin adhesive layer and the polyolefin film and is superior in heat resistance and water resistance. (col. 3, lines 48-64)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use sol-gel materials based on methyltri(m)ethoxysilane, phenyltri(m)ethoxysilane, and/or diphenyldi(m)ethoxysilane, as taught by Sakai, in order to provide an adhesive with superior in heat resistance and water resistance.

Conclusion

Art Unit: 1751

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh T. Nguyen whose telephone number is (571) 272-8082. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh T. Nguyen
Examiner
Art Unit 1751


Mark Kopec
Primary Examiner

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050399

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C09J9/02 C09J183/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C09J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1 544 056 A (OWENS ILLINOIS INC) 11 April 1979 (1979-04-11) claims 1-4 example 1 page 1, line 88 - page 2, line 11 page 1, line 12 - line 15	1-8
X	US 6 066 269 A (WEI YEN ET AL) 23 May 2000 (2000-05-23) claim 1 column 11, line 57 - line 67	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents.

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

8 document member of the same patent family

Date of the actual completion of the international search

15 July 2004

Date of mailing of the international search report

26/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Schlicke, B

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050399

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
GB 1544056	A	11-04-1979	DE	2743773 A1	06-04-1978
			JP	53045972 A	25-04-1978
			NL	7710794 A	06-04-1978
US 6066269	A	23-05-2000	US	5868966 A	09-02-1999
			US	6277304 B1	21-08-2001